

Amendments to the Claims:

Please amend claims 1-11 and 14-18, and cancel claims 12-13 and 19-26, and add new claims 27-36, in accordance with the list of claims that begins on the following page, and which replaces all prior versions of claims in the application.

List of Claims:

1. (currently amended) A ~~method signal bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform operations~~ for processing network discovery data, ~~the operations~~ comprising the following operations:

defining a plurality of network data aggregations;

[[assigning]] computing a current state value [[to]] for at least one of the data aggregations, wherein the current state value is a CRC code, and wherein the CRC code is computed utilizing data associated with the corresponding data aggregation and a CRC polynomial, wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form:

$$x^{32}+x^{26}+x^{23}+x^{22}+x^{16}+x^{12}+x^{11}+x^{10}+x^8+x^7+x^5+x^4+x^2+x+1;$$

for at least one current state value, determining if the current state value is different than a corresponding prior state value for a corresponding data aggregation; and

merging data corresponding with at least one data aggregation determined to have a current state value that is different than a corresponding prior state value, with prior data corresponding with at least one different data aggregation determined to have a current state value that is not different than a corresponding prior state value for the different data aggregation.

2. (currently amended) The ~~method signal bearing medium~~ of claim 1, wherein the plurality of network data aggregations are defined based on zoning information.

3. (currently amended) The ~~method signal bearing medium~~ of claim 1, wherein the plurality of network data aggregations are defined based on topology information.

4. (currently amended) The ~~method signal bearing medium~~ of claim 1, wherein the plurality of network data aggregations are defined based on device attributes information.

5. (currently amended) The ~~method signal bearing medium~~ of claim 1, wherein the operations further comprise polling agents, to gather data for the at least one data aggregation [[to]] for which a current state value is to be [[assigned]] computed.

6. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operations further comprise receiving notifications from agents, to gather data for the at least one data aggregation ~~[[to]]~~ for which a current state value is to be ~~[[assigned]]~~ computed.
7. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operations further comprise assigning an initial state value for each data aggregation.
8. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operation of ~~[[assigning]]~~ computing a current state value ~~[[to]]~~ for at least one of the data aggregations is performed by at least one agent discovery service.
9. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operation of ~~[[assigning]]~~ computing a current state value ~~[[to]]~~ for at least one of the data aggregations is performed by a management client.
10. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operation of ~~[[assigning]]~~ computing a current state value ~~[[to]]~~ for at least one of the data aggregations comprises processing data in the at least one of the data aggregations in a prescribed order.
11. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operations further comprise, prior to the operation of ~~[[assigning]]~~ computing a current state value ~~[[to]]~~ for at least one of the data aggregations, organizing data in the at least one of the data aggregations in a prescribed order.
12. (canceled)
13. (canceled)

14. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operations further comprise receiving data corresponding with at least one data aggregation wherein the current state value is different than a corresponding prior state value.

15. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operations further comprise receiving data corresponding with at least one data aggregation wherein the current state value is not different than a corresponding prior state value.

16. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operation of[[]], for at least one current state value, determining if the current state value is different than a corresponding prior state value, is performed for each of a plurality of levels in a hierarchy of data aggregations.

17. (currently amended) The method ~~signal bearing medium~~ of claim 16, wherein the plurality of data aggregations includes at least one data aggregation that is a subset of a corresponding superset data aggregation, and wherein the subset data aggregation is located in the hierarchal ordering after the corresponding superset data aggregation.

18. (currently amended) The method ~~signal bearing medium~~ of claim 1, wherein the operations further comprise requesting polling on data aggregations that are subsets of a superset data aggregation that has a changed state value.

Claims 19-26 (canceled).

27. (new) A method for processing network discovery data, comprising the following operations:

defining a plurality of data aggregations, wherein the data aggregations are defined based on fabric boundaries;

obtaining initial data for each data aggregation;

assigning an initial state value for each data aggregation, wherein assigning an initial state value for each data aggregation includes organizing the initial data in each data aggregation in a prescribed order;

gathering data for at least one data aggregation in the plurality of data aggregations;

organizing the data in a particular order, for each data aggregation for which data is gathered;

traversing the data in a particular order, for each data aggregation for which data is gathered;

computing a current state value for each data aggregation for which data is gathered, wherein each current state value is a CRC code, and wherein each CRC code is computed utilizing data associated with the corresponding data aggregation and a CRC polynomial, wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form:

$$x^{32}+x^{26}+x^{23}+x^{22}+x^{16}+x^{12}+x^{11}+x^{10}+x^8+x^7+x^5+x^4+x^2+x+1; \text{ and}$$

for each computed current state value, determining if the current state value is different than a prior state value for the corresponding data aggregation.

28. (new) The method of claim 27, wherein the operations further comprise gathering a complete set of data, wherein the complete set of data includes zoning information, topology information and device attributes information.

29. (new) The method of claim 27, wherein the operations of gathering data, organizing the data, traversing the data, and computing a current state value, are first performed with a superset data aggregation which is a superset of a plurality of subset data aggregations, and then are performed with at least one of the subset data aggregations.

30. (new) The method of claim 27, wherein the operations of gathering data, organizing the data, traversing the data, and computing a current state value, are first performed with a superset data aggregation which is a superset of a plurality of subset data aggregations, and if there is a state change in the superset data aggregation, the operations of gathering data, organizing the data, traversing the data, and computing a current state value are then performed with at least one of the subset data aggregations.

31. (new) The method of claim 27, wherein the operations of gathering data, organizing the data, traversing the data, and computing a current state value, are first performed with a superset data aggregation which is a superset of a plurality of subset data aggregations, and if there is a state change in the superset data aggregation, the operations of gathering data, organizing the data, traversing the data, and computing a current state value are then performed with a first subset data aggregation in the plurality of subset data aggregations, and if there is a state change in the first subset data aggregation, then the operations of gathering data, organizing the data, traversing the data, and computing a current state value are then performed with a lower level data aggregation which is a subset of the first subset data aggregation.

32. (new) The method of claim 31, wherein the superset data aggregation is an entire system.

33. (new) The method of claim 31, wherein a state change is defined as a current state value which is different than a corresponding prior state variable.

34. (new) The method of claim 31, wherein the superset data aggregation, and the plurality of subset data aggregations, and the lower level data aggregation are organized in a hierarchy.

35. (new) A method for processing network discovery data in a hierarchy of data aggregations, comprising the following operations:

computing a current state value for a superset data aggregation, wherein the current state value is a CRC code, and wherein the CRC code is computed utilizing data associated with the superset data aggregation and a CRC polynomial, wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form:

$$x^{32}+x^{26}+x^{23}+x^{22}+x^{16}+x^{12}+x^{11}+x^{10}+x^8+x^7+x^5+x^4+x^2+x+1;$$

determining if the current state value for the superset data aggregation is different than a corresponding prior state value, and if so:

determining if a hierarchal analysis is to be conducted, and if so:

determining if there is a lower level in the hierarchy that has not been processed, and if

so:

determining if a current state value for a first subset data aggregation, in a first level of the hierarchy, which is a subset of the superset data aggregation, is different than a corresponding prior state value, and if so:

determining if there is a level in the hierarchy lower than the first level, that has not been processed,

and if so:

determining if a current state value for a second subset data aggregation, in a second level of the hierarchy, which is a subset of the first subset data aggregation, is different than a corresponding prior state value, and if so:

determining if there is a level in the hierarchy lower than the second level, that has not been processed, and if so, determining if a current state value for a third subset data aggregation, in third level of the hierarchy, which is a subset of the second subset data aggregation, is different than a corresponding prior state value.

36. (new) A method for processing network discovery data in a hierarchy of data aggregations, comprising the following operations:

computing a current state value for a superset data aggregation, wherein the current state value is a CRC code, and wherein the CRC code is computed utilizing data associated with the superset data aggregation and a CRC polynomial, wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form:

$$x^{32}+x^{26}+x^{23}+x^{22}+x^{16}+x^{12}+x^{11}+x^{10}+x^8+x^7+x^5+x^4+x^2+x+1;$$

determining if the current state value for the superset data aggregation is different than a corresponding prior state value, and if so:

determining if a hierarchal analysis is to be conducted, and if so:

determining if there is a lower level in the hierarchy that has not been processed, and if so:

determining if a current state value for a first subset data aggregation, in a first level of the hierarchy, which is a subset of the superset data aggregation, is different than a corresponding prior state value, and if so:

determining if there is a level in the hierarchy lower than the first level, that has not been processed, and if not:

receiving data corresponding with at each data aggregation that has a current state value that is different than a corresponding prior state value.